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An Evaluation of the CID Perceived Self-Competence Questionnaire

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The Development of Self-Esteem in Children

Social psychology theory holds that an individual's conception of himself is learned through social interaction. It is how others respond to him that determines how he feels about himself. In recent years, most psychologists acknowledge the role of significant others in the development of self-esteem in children. In essence, the development of a sense of self relies on the decentering of the self-other conceptions that an individual possesses in infancy. An individual must move from a lack of distinction between the concept of "self" and "other" to an understanding of the self and that the self and the other differ from one another. Moreover, the individual must develop the ability to take a third-party perspective of the self and the other to facilitate objective appraisal of the self (Selman, 1980, cited in Harter, 1983).

James (1892/1963) set forth the classic definition of self-esteem in an individual. He stated that one's feelings of worth are determined by the ratio of one's actual accomplishments to one's supposed potentialities. Therefore, achievement as well as the emotion aroused by self-evaluation is implicit in the development of self-esteem. Cooley (1902) proposed that what becomes of the self is what we imagine others think of us. He maintained there were three components of self-esteem: our perceived appearance to others, our perception of the others judgement of our appearance and self-feelings of pride and shame. He referred to this concept as the "looking glass self." He asserted that one's self-feeling is intertwined with the exercise of power and one's sense of being a causal agent. As such, these are critical components of one's general sense of self.

Mead (1967) proposed that the "socialized self" aims toward a convergence of the perspective of others with the perspective of the self. This is accomplished through role

taking. The self, therefore, is constructed from the point of view of significant others. The various aspects of the self differentiate as the individual becomes an object of experience by taking the role of others toward the self.

Coopersmith (1967) maintained that as a child grows and social interactions increase, self-esteem is affected. He defined self-esteem as a personal judgement of worthiness that is expressed in the attitudes that the individual holds about himself. The impact of the opinions, attitudes and behaviors of people who are valued by the child become increasingly more important than those of strangers and other peripheral relationships.

Rosenberg (1965) made a distinction between self-esteem and self-confidence. Self-confidence refers to the anticipation of successfully mastering a challenge and the belief that one can make things happen in accordance with one's inner wishes. Self-esteem implies self-acceptance, self-respect and general feelings of self-worth. An individual's level of self-confidence is not necessarily related to his overall self-esteem. The young child's conclusions about what he is like rests heavily on the perceived judgement of external authority, particularly adult authority. He found that children who trust the judgement and insight of their significant others are more likely to be affected by the actions of those people than by the actions of people who are not trusted and perceived as being insightful.

Cotton (1983) proposed three main sources of self-esteem: (a) the esteem of others, (b) competence and (c) the self as a selective filter of the esteem of others as well as competence. Her developmental model states that initially, each component is separate and all become intertwined as the individual develops. Positive self-esteem is then defined as the healthy development of each component and a degree of harmony between them. This

model holds that the opinion of others is significant in developing positive self-esteem, and this commences with the individual's beginning mastery of skills and achievements as a child. She supports the position that healthy self-esteem depends on a competent child developing in a supportive, praising world of loving adults.

Empirical research on self-concept suggests a general pattern of development in the individual. When asked to describe themselves, young children seem to focus on the concrete and observable aspects of the self, while older children seem to focus on more abstract concepts such as personality traits. Bannister and Agnew (1976) noted that young children (aged 5 to 7 years) described themselves in terms of concrete physical features or actions. In contrast, older children (aged 8 to 10 years) used more abstract descriptors of personality. For example, when asked if they liked being themselves, the younger children were more likely to name a specific person they would rather be, while the older children discussed an ideal alternative self in terms of psychological and physical qualities (Bannister & Agnew, 1976, p. 115). In a study by Harter (1982a), eight years old children reported that opposite feelings can exist simultaneously; however, they cannot exist for the same event or person. In contrast, ten years old children reported opposite feelings about a single event was possible. Montemayor and Eisen (1977) in their study with children 10 to 18 years old found that as age increases, the individual's self-concept becomes increasingly more abstract. The younger subjects (10 and 11 years old) used concrete descriptions of the self, while the older subjects (16 to 18 years old) used more abstract descriptions. These findings support the hypothesis that developmental differences in self-esteem occur as age increases.

In more recent years, research has revealed that there are several domains composing an individual's general self-esteem. Several researchers have attempted to establish

differentiated models to describe the development of self-esteem in an individual. L'Ecuyer (1981) proposed a multidimensional model of the self with five general areas that are further subdivided into specific areas. One area, the adaptive self, is comprised of self-esteem and self-activity. Self-esteem is further divided into the areas of competence and personal worth. Epstein (1973) maintains that self-esteem is the superordinate construct under which mental and physical competence are subordinate components. White (1963) proposed four categories under the general area of self-esteem: competence, sense of control, moral worth and acceptance. Harter (1978, 1981) holds that self-esteem is comprised of multiple components including physical competence, cognitive competence, social acceptance, control over outcomes and general self-worth.

Harter (1983) proposed a model that enumerates stages of self-development as the child moves from infancy through adolescence. In stage I, the young child perceives himself in concrete terms. He is good at doing a variety of tasks, or he is bad at a variety of tasks. Harter refers to this as the *global* stage of self-development. In stage II, the child begins to label his behaviors, yet he maintains the "all or nothing" attribution to his abilities. Over time, the child begins to differentiate his abilities and can acknowledge that he is "good" at some tasks and "bad" at other tasks. Harter refers to this as the *trait label* stage of self-development. It is during this stage that the child initially develops the capacity for self-awareness. In stage III, the older child begins to use abstract descriptions of his abilities in the same "all or nothing" manner he used during stage I and early stage II. These self-evaluations become increasingly differentiated over time. Harter refers to this as the *single abstraction* stage of self-development. During the fourth stage, the young adult achieves

higher-ordered abstraction abilities and demonstrates self-awareness from a more analytical perspective.

The Development of Self-Esteem in Deaf Children

Deafness is much broader than hearing loss; it is a complex and psychological reality that permeates one's life (Rosen, 1986). Hearing loss is a sensory deprivation that limits the world of experience. It deprives the individual of natural resources from which the personality develops (Myklebust, Neyhus & Mulholland, 1962). Many of the difficulties experienced by the deaf are the results of early and ongoing difficulties with socialization and communication skills. The hearing impairment itself does not directly cause poor self-esteem; rather, the degree to which one is able to communicate may be a contributing factor in the development of self-esteem (Schlesinger & Meadow, 1972). When there is a feeling that others care for you, the potential for self-acceptance is enhanced (Becker, 1987). The deaf child is no different than his hearing peers in that he needs to develop a solid sense of self-esteem and personal identity in order to achieve success as an adult; however, the presence of a hearing loss can make this task more difficult.

Deaf children are faced with the same developmental tasks as their hearing peers; however, each issue is in some way influenced by the existence of a hearing loss. Diver (1990) suggested that any deviation from the norm during the time of peer group relationships can lead to isolation and result in severe psychological ramifications for the individual. The generally poor communication skills of the hearing-impaired set them apart from the rest of the group (Meadow-Orlans, 1987). Levine (1960) states that for an individual to be socially mature, he needs to acquire information regarding social customs, habits and experience putting that information into practice. Furthermore, he needs an

opportunity to enjoy social relationships, attitudes that impel him to seek out new experiences, and a healthy psychic structure that provides well-balanced motivation. The deaf, however, are typically ill prepared to function effectively in the hearing world. Delayed language and social skills will contribute to delayed personal and social development (Becker, 1987). The social ineptness of the hearing impaired person may prevent the development of successful peer relationships that allow for intimacy with others, improved interpersonal skills and personal growth. These qualities are crucial in dealing with critical life events that demand coping skills and adaptive behavior (Becker, 1987).

Psychologists have identified the human need to belong as an essential and primary need. As children, deaf people are often deprived of an essential support system that is necessary to development (Rosen, 1986) in that they cannot always communicate successfully with their families and peers. It is for this reason that deaf children of hearing parents have significantly worse self-image than those who have deaf parents (Vernon & Andrews, 1990). Desselle (1994) found that for hearing-impaired children who use simultaneous communication, those children whose parents learned to communicate with sign language had significantly higher self-esteem than those children whose parents did not learn sign language. Warren and Hasenstab (1986) noted that if a child's ability to communicate is hindered, the child's ability to develop a strong self-concept is severely limited.

Deaf children with deaf parents generally exhibit normal patterns of development in social, linguistic and cognitive domains relative to their hearing peers (Marschark, 1993). This appears largely to be a function of the quality of early interactions with parents who share a common mode of communication. The self-concept of deaf children, however, is

generally less positive than comparable groups of hearing peers (Meadow-Orlans, 1987; Roessler & Bolton, 1978). The overall stability of the individual's self-concept is determined by his ability to derive pleasure from life, to assimilate experiences and maintain self-esteem (Roessler & Bolton, 1978). The stress deriving from hearing loss causes emotional adjustments to be more difficult to achieve (Myklebust, et al., 1962). For the deaf child, problems with self-esteem are often related to the limited information available on which to base self-image as compared to children with normal hearing (Garrison & Tesch, 1978).

The Role of Parents in Developing Self-Esteem

Self-concept develops from early experiences that a person has with his environment, particularly his personal relationships (Mead, 1967). Most hearing-impaired children are born to parents with normal hearing. Upon diagnosis of a deaf child, parents often experience feelings of frustration, grief and anger. Negative feelings are inadvertently directed toward the child on occasion, which in turn affects the environment in which the child is raised. Inexperience with deafness coupled with a denial of the child's hearing loss can foster an environment in which unrealistic expectations are placed on the child. There is often an attempt to make the child like other children, no matter what the sacrifice (Levine, 1960). The inability to "live up" to parental expectations is often related to the low self-esteem of hearing impaired children. In 1995, Gregory, Bishop and Sheldon conducted a survey that revealed many parents of hearing-impaired children deny the existence of hearing loss.

When serious social inadequacies are noted in deaf people, it is often due to the environment in which they are reared (Levine, 1960). The early response of the parent to the

diagnosis of hearing loss is the first in a long series of social responses to the handicap with which the handicapped person must cope (Meadow, 1976). If a deaf child has grown up in a family that considers the child's deafness a stigma, the child is likely to have low self-esteem (Desselle, 1994). Meadow-Orlans (1987) found that overall self-esteem levels of hearing-impaired children was related to family climate. Those who had high self-esteem were raised in a "positive family climate" that accepted the child's hearing loss and focused on success in social and academic environments. It has been demonstrated that deaf children with deaf parents often have higher self-esteem than deaf children with hearing parents (Meadow, 1976). The family is often the main source of interaction and socialization for the hearing-impaired child. Warren and Hasenstab (1986) found that parental child rearing attitudes are the best predictors of self-concept in hearing-impaired children. The role of the family in the development of a positive self-concept is critical for the hearing-impaired child. If the child feels his family accepts him, he will ultimately accept himself. The inability of a family to accept their hearing-impaired child will undoubtedly affect the child's ability to develop positive self-esteem.

Deaf Children in School

Research has suggested that mainstreamed hearing-impaired children have a lower self-concept than their hearing peers, despite the potential academic benefits of mainstreaming. The communicative patterns of school-aged children has an impact upon their social interactions. Antia (1982) reports that mainstreamed hearing-impaired children in grades one through six tend to interact more with their teachers than with their hearing peers. This adult dependence is viewed negatively by normal hearing children and further

limits the opportunity for peer interactions. Loeb and Sargiani (1986) found that mainstreamed hearing-impaired children aged eight through fifteen years described themselves as less popular and unlikely to be chosen as a friend by a hearing peer. The reduced linguistic abilities of the hearing-impaired child results in fewer opportunities to develop social relationships (Maxon & Brackett, 1992). Without an opportunity to develop social abilities, social development is often delayed in the hearing-impaired child (Fitz-Gerald & Reeves Fitz-Gerald, 1987).

A study by van den Horst (1971) comparing hearing-impaired children in the mainstream to hearing-impaired children in a special school indicated that although the mainstreamed subjects performed better on verbal achievement tests, few mainstreamed subjects were judged to be well-adjusted overall. Reich, Hambleton and Houldin (1977) found that mainstreamed hearing-impaired children receiving itinerant services had a more positive self-concept than hearing-impaired children who were fully or partially mainstreamed without itinerant services. They further noted that the self-concept of the mainstreamed child decreased over time, despite the advances in academic performance. Farrugia and Austin (1980) examined the social emotional patterns of hearing-impaired children in different educational settings and found that deaf children in public schools ranked lower on measures of self-esteem, social-emotional adjustment and maturity than age matched groups of hard of hearing children in public schools, deaf children in residential schools and normal hearing children. They further noted that the mean score on the self-esteem measure for deaf children in public schools was below the normal range. These findings suggested that social rejection as well as social isolation contributes to the lower self-esteem and adjustment in hearing-impaired children. In addition, Reich, et al.

(1977) noted that the child's ability to comprehend speech was related to his social and emotional success in the mainstream. This research suggests that hearing-impaired children in the mainstream are at-risk for low self-esteem. The ability to appropriately evaluate the self-concept of these children would allow professionals to identify and address the specific difficulties a hearing-impaired child is experiencing.

Psychometric Measures of Self-Esteem

Research supports the apparent stability of self-esteem in children aged 10 to 12 years (Rosenberg, 1979) with a drop in self-esteem at the junior high school period (Harter & Connell, 1982, cited in Harter, 1983; Simmons, Rosenberg & Rosenberg, 1973). Similar disruptions have been noted in children moving from kindergarten to first grade (Harter & Pike, 1984). These findings suggest that environmental changes place demands that heighten self-consciousness, instability of self-image and lowered self-esteem, disrupting his perceived competence and reducing feelings of self-worth (Harter, 1983).

The Coopersmith Self-Esteem Inventory (Coopersmith, 1967) seeks to assess the subject's feelings about a range of attributes. The subject's total score is calculated across items of diverse content. This score is believed to reflect the individual's global self-esteem. One of the primary drawbacks of this measure is that items were generated for adults and then re-worded for children. Coopersmith concluded from his data that children do not make differentiations across the four domains of self-esteem examined in his measure (school, peers, parents, self); therefore, the obtained score is global and can be generalized to any one specific domain. The overall score was highly correlated with scores obtained on social desirability scales completed by his subjects. He concluded that this measure possibly

taps into the child's idealized self. The Coopersmith Self-Esteem Inventory has a .70 test-retest reliability over a three-year period.

The Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) is similar to the Coopersmith measure in that it also seeks to assess feelings across a range of attributes. According to Piers (1984), self-concept is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes. The measure is intended to be administered to children aged 8 to 18 years and focuses on six domains: behavior, intellectual status, physical appearance, anxiety, popularity, happiness. Items were adapted from a base of statements made by children with regard to what they liked or disliked about themselves. The Piers-Harris measure provides a cluster of subscale scores with no overall score. Test-retest reliability is reported as ranging from .42 to .96 (median $r = .75$) over a period of two weeks to one year.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a ten-item measure that assesses the individual's global self-esteem. According to Rosenberg (1979) the self-concept is not a collection but an organization of components; therefore global self-concept and its constituent components should not be studied collectively. He holds that each can and should be examined in its own right. The Rosenberg measure has been demonstrated to have good construct validity and test-retest reliability; however, it was initially designed for adolescents and adults and modified for children.

The Perceived Competence Scale for Children (Harter, 1982) and The Pictorial Scale of Perceived Self-Competence and Social Acceptance for Young Children (Harter & Pike, 1984) purport to be sensitive to domain specific competence and global self-esteem. These measures are based on a developmental model of intrinsic mastery motivation which holds

that self-esteem is comprised of multiple components including physical competence, cognitive competence, social acceptance, control over outcomes and general self-worth (Harter, 1978, 1981). Two measures were designed to evaluate children based on age. The Perceived Competence Scale for Children was designed to assess older children (3rd to 10th grade) and has five subscales: scholastic competence, social acceptance, athletic competence, physical appearance and behavioral conduct. The Pictorial Scale of Perceived Self-Competence and Social Acceptance for Younger Children was designed to assess children aged 4 to 7 years and has four subscales: cognitive competence, physical competence, social acceptance and maternal acceptance. The pictorial format was chosen to offset the tendency to give a socially desirable response. General self-worth was not evaluated in this measure because it was demonstrated in a pilot study (Harter, 1983) that young children do not possess a sense of self in general. Furthermore, younger children do not make a distinction between cognitive and physical skills.

Self-Competence Questionnaires

Harter (1992) found that children who perceived themselves to be competent felt better about their academic performance, which in turn led them to adopt or maintain an "intrinsic motivational orientation." Children with low levels of perceived competence, however, felt badly about their academic performance and opted for an "extrinsic motivational orientation." Harter and Pike (1984) reported that children who were new to a school demonstrated lower perceived social competence than those children who had attended the same school for one or more years. They further reported that children who

were held back in one or more grades demonstrated lower perceived cognitive competence than those children who were never held back a grade in school.

Harter and Connell (1982, cited in Harter, 1983) found that actual achievement predicts one's evaluation of academic competence, which influences one's affective reactions. The affective component then predicts one's motivational orientation toward engaging in school tasks. Bierer and Harter (1981, cited in Harter, 1983) found that for accurate raters, achievement predicts perceived cognitive competence and further predicts preference for challenge. For underraters, achievement is negatively correlated with actual cognitive competence. These findings suggest that achievement impacts self-evaluation, and further, self-esteem.

Numerous attempts have been made to evaluate the self-esteem of hearing-impaired children. Several researchers have modified measures normed for hearing children in an attempt to appropriately assess the hearing-impaired child (Desselle, 1994; Loeb & Sargiani, 1986; Warren & Hasenstab, 1986; Garrison, et al., 1978; Reich, et al., 1977; Craig, 1965; Myklebust, et al., 1962). Schlesinger and Meadow (1972) developed a "cartoon test" to measure self-esteem in hearing-impaired children. To date, The Meadow-Kendall Social-Emotional Assessment Inventory (Meadow-Orlans, 1983) is the only measure currently available that has normative data regarding hearing-impaired children. However, it is administered to teachers of hearing-impaired children, and therefore, does not assess the child in a direct manner.

The CID Perceived Self-Competence Questionnaire (CID PSQ) was developed as an attempt to find a way to measure the social-emotional adjustment of school-aged deaf children, and the purpose of this investigation was to validate this new measure. The CID

PSQ was modified from The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1984). Harter and Pike chose a pictorial format for their measure because it allowed them to depict skills and activities in a concrete manner. In general, the hearing-impaired child often demonstrates difficulty with reading and language. The pictorial format was selected to avoid confounding the task with reading and/or language difficulties.

The CID PSQ is a twenty-four item questionnaire that addresses five areas of competence: cognitive competence, physical competence, social-emotional competence, communication competence and school competence. Harter's Pictorial Scale of Perceived Competence and Social Acceptance evaluates the individual across four domains of competence, three of which are examined with the CID PSQ (cognitive competence, physical competence, and social-emotional competence). The CID PSQ adds communication and school competence subscales. According to Schlesinger and Meadow (1972), the degree to which one is able to communicate may be a contributing factor in the development of self-esteem. Furthermore, Farrugia and Austin (1980) reported that hearing-impaired children in public schools ranked lower than children with normal hearing. These findings suggest that the domains of communication and school competence also warrant investigation in hearing-impaired children.

As a method of establishing validity for the various subscales on the CID PSQ, a series of correlational analyses were planned. Data on other measures of child competence were obtained from records to examine the relationship between the CID PSQ subscale scores and measures that one would expect to be related. Specifically, the child's score on the WISC-R Performance Test (Wechsler, 1981) was used to validate the cognitive

competence subscale; the score on the Meadow-Kendall Social-Emotional Assessment Inventory (Meadow-Orlans, 1983) was used to validate the social-emotional subscale; the child's score on the TACL-R (Carrow-Woolfolk, 1985) was used to validate the communication subscale; the child's reading score on the PIAT (Dunn & Markwardt, 1970) was used to validate the school subscale. An adequate validating measure was not found for the physical subscale. It was predicted that these validating measures would correlate significantly with subscale scores, thus giving confidence that the CID PSQ subscales were related to measurable behaviors in the same domain.

Predictions were further generated regarding the relationship of the subject's overall score on the CID PSQ to general areas that have been considered possible factors influencing self-esteem in deaf children who have cochlear implants. The following factors were considered: (a) age at implantation; (b) speech perception abilities as measured by the Lexical Neighborhood Test (Kirk, Pisoni, & Osberger, 1995); (c) classroom setting; (d) communication mode.

Method

Participants

The CID PSQ was administered as part of a larger study examining the effects of different amounts of rehabilitation on children who have cochlear implants; particularly language and speech perception abilities. Subjects were school-aged deaf children ($n=59$; mean age: 9;2) who have cochlear implants (mean years of use: 5;7) who participated in summer camp at Central Institute for the Deaf in 1996 and 1997. various communication modalities were represented (cued speech, $n=2$; oral, $n=28$; or total communication, $n=29$),

and the children were from a variety of educational settings (full-time special education, $n=15$; part-time mainstream, $n=12$; full-time mainstream, $n=32$).

Procedure

The questionnaire was presented to each subject individually in his or her preferred mode of communication. Subjects were presented with two pictures of a child engaged in a task. One pictured the child being successful at a task; the other presented the child as not being successful. Each picture was described to the child with one declarative sentence. Each subject was asked to select which picture was "most like you." Subjects were then asked to decide if the selected picture was "a little bit like you" or "a lot like you."

Scoring

A four point scale was assigned to the item with a score of "4" representing that the positively stated picture was perceived by the child as a lot like him, and a score of "1" representing that the negatively stated picture was perceived by the child as a lot like him. A mean score was calculated for each subscale, and an overall score was produced by calculating the mean of the subscale scores.

Results

Pearson r correlations were performed on the variables discussed above and the resulting matrix is displayed in Table 1. None of the correlations were statistically significant at the .05 alpha level.

The overall CID PSQ score was then correlated with age at implantation, speech perception abilities, classroom setting, and communication mode used, in order to examine the relationship between these variables and a child's view of self-competence. The results of

this analysis are found in Table 2. Examination of this table reveals that none of the correlations were statistically significant.

Discussion

The results of this study fail to establish the validity of the CID Perceived Self-Competence Questionnaire. There are several possible explanations why significant correlations were not found when analyzing the data for this measure. First, there was very little range in the scores on the CID PSQ across children. On a scale of 1-4, most of these children scored in the 3-4 range. It is very difficult to find correlations in data when there is a limited range of scores. Second, it is possible that the children were not entirely honest in self-reporting. The children may have answered in the way they felt the test administrator wanted them to answer. It is further possible that the children were providing answers that made them appear more confident than they actually were.

The CID PSQ as it currently exists, may not be a valid measure of perceived self-competence in hearing-impaired children. It is possible that the questions do not address issues that are pertinent to school-aged hearing-impaired children. One alternative would be to revise the measure such that the questions reflect the concerns of this population. Furthermore, it is possible that the children were providing what was perceived as the most desirable response to the questions. Another alternative is to revise the instructions such that the children will accurately answer the questions. In addition, the test administrator may need to verify answers by asking the children to give examples or express why a certain response was given. It is also possible that the validating measures used in this study do not accurately reflect the domains examined by this measure. A final alternative for establishing

the validity of the CID PSQ is to investigate whether other measures will correlate with the domains of perceived self-competence addressed in this measure.

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Table 1

Relationship Among Subscale Scores and Validating Variables

Variables	CID PSQ Subscales			
	PSQ-COG	PSQ-COM	PSQ-SCH	PSQ-SE
Performance IQ ^a	0.211			
TACL ^b		0.161		
PIAT- vocabulary ^b			0.005	
PIAT- comprehension ^b			0.085	
M-K social				-0.082
M-K emotional				-0.089

Note: n =59

^aThis score was available only for 57 subjects^bThis score was available only for 45 subjects

Table 2

Relationship Between Overall Score on CID PSQ and Influencing Variables

Variables	CID PSQ Overall Score
Age at implant	0.231
Speech perception	-0.069
Classroom setting	-0.169
Communication mode	-0.100

Note: n=42